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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,697	03/06/2002	Hiroshi Harada	CRL 7	2502
7590 08/11/2005 Mitchell P. Brook, Esq. Luce, Forward, Hamilton & Scripps Suite 200 11988 El Camino Real San Diego, CA 92130			EXAMINER GHULAMALI, QUTBUDDIN	
			ART UNIT 2637	PAPER NUMBER

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*Supplemental*  
**Notice of Allowability**

Application No.

10/092,697

Examiner

Qutub Ghulamali

Applicant(s)

HARADA ET AL.

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/6/2002.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ The drawings filed on 06 March 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 6/6/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-26 allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 7, 13, 19 and 25 the prior art does not teach or fairly suggest in combination with the other claim limitations a receiving apparatus comprising a prediction section whereby the prediction section (a) compares that portion of said reception signal which corresponds to said known signal with a result of modulating said known signal and compares that portion of said reception signal which corresponds to said data signal with that portion of said modulated data signal which corresponds to said data signal to acquire a time series of comparison results, (b) replaces a value in said time series of comparison results which satisfies a predetermined exclusion condition with an old value of said time series of comparison results, (c) averages a time series of comparison results resulting from that replacement, and (d) lets a result of that averaging be a predicted transmission characteristic.

Such limitations, as recited in claims 1, 7, 13, 19 and 25 is neither anticipated nor rendered obvious by the prior art.

2. Claims 2-6, 8-12, 14-18, 20-24, and 26 are allowed by virtue of their dependency to claims cited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### **US Patents:**

Kroeger et al (USP 6895060) discloses an adaptive weighting method for orthogonal frequency division multiplexed soft symbols using channel state information estimates

Endres et al (USP 6668014) shows an equalizer method and apparatus using constant modulus algorithm in blind equalization and decoding.

Yang et al (USP 5652541) discloses a data demodulation using decision feedback and reference parameter recovery.

Eyuboglu (USP 4713829) shows coded modulation decoder capable of reducing the effects of channel distortion.

Chennakeshu et al (USP 6137843) discloses a method and apparatus for a multi-signal canceling demodulator using information from adjacent channel signals.

Leclerc et al (USP 6081559) shows an apparatus for detecting the presence or absence of a digitally modulated carrier in a receiver.

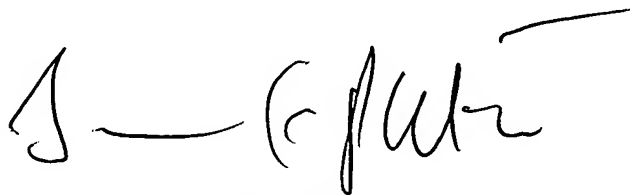
Hulbert (USP 5717723) shows a modulation scheme requiring fully coherent demodulators of known transmission of pilot signal to resolve phase ambiguity.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.  
June 8, 2005.

A handwritten signature in black ink, appearing to read "J. K. Patel", with a long horizontal line extending from the end of the signature.

JAY K. PATEL  
SUPERVISORY PATENT EXAMINER